NEWTEST

POWERTIMER

ANALYZER
USER´S MANUAL

Powertimer Analyzer ENG

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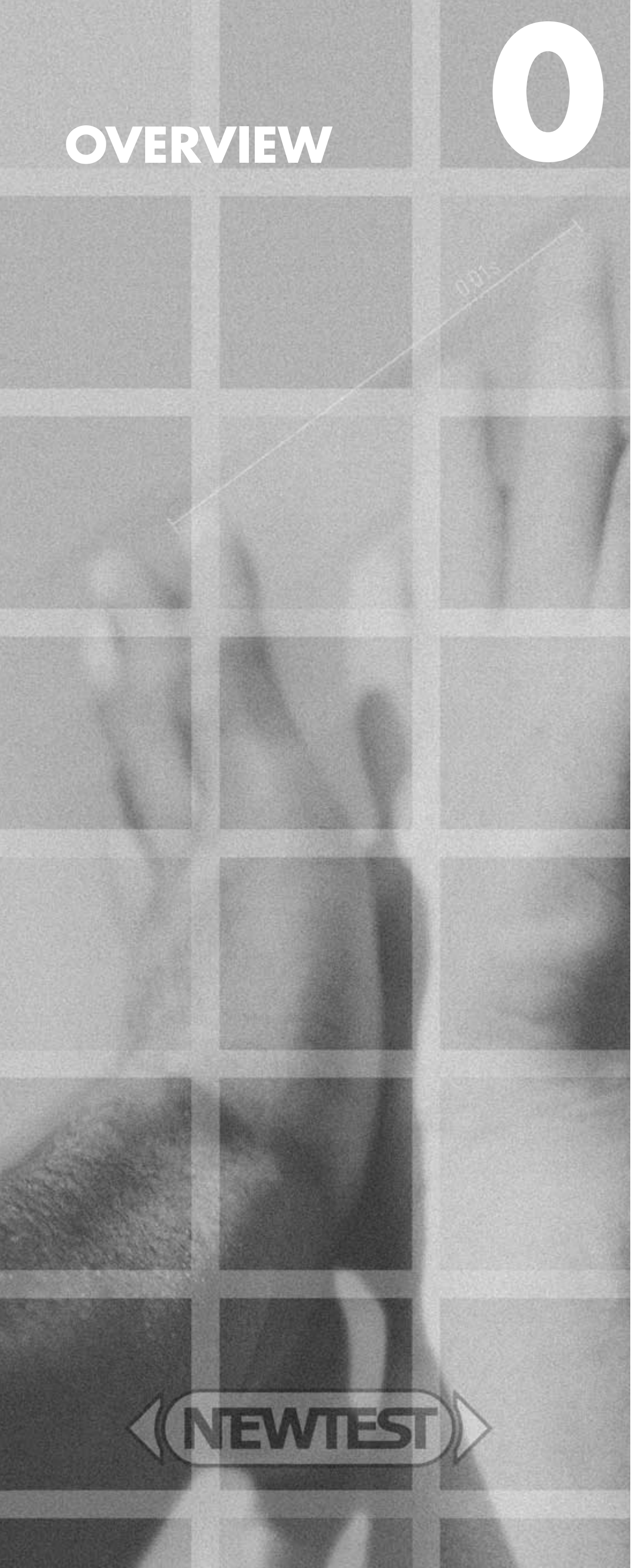


0 OVERVIEW

0.1 Purpose of the software

The purpose of this software is to analyze and report the test results collected from Newtest Powertimer testing system. You can generate either numerical or graphical reports of the selected session(s), athletes(s) or group(s).

New athletes and groups can be created with the Powertimer Analyzer software and sent to Newtest Powertimer for actual testing. After the performed session all test data is transferred from Newtest Powertimer to Powertimer Analyzer via HotSync. The synchronization sequence is made as easy and flexible as possible, you do not have to do anything more than press the *HotSync*- button on the Palm device or cradle (In some occasions, e.g. duplicate athlete created at the Palm end, you will be prompted).

IMPORTANT: The Newtest Powertimer Analyzer database (Powertimer_db.mdb) must be backed up regularly. The database is located at the same directory where the Newtest Powertimer Analyzer software is installed.

1 SOFTWARE REQUIREMENTS

1.1 Software requirements and installation

To install and run the Newtest Powertimer Analyzer you need:

- An Intel-compatible PC with Microsoft Windows 98, ME, 2000 or XP
- 32 MB RAM (128 megabytes recommended)
- 100 MB disk space
- Internet connection for automatic software updates

Note: In this manual, all references to a personal computer are also applicable to laptop computers

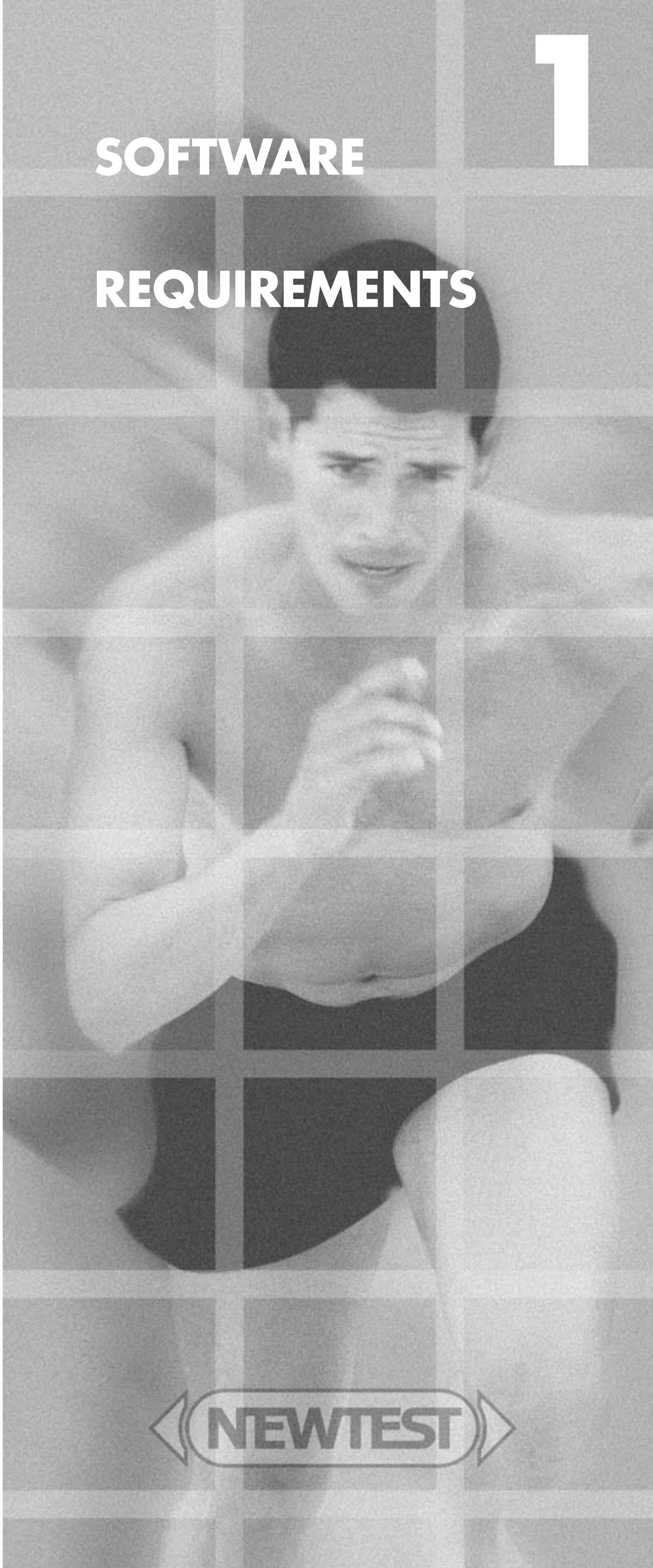
1.2 Other requirements

The Palm Desktop Software must be installed before Newtest Powertimer Analyzer.

1.3 Automatic software update

The Newtest Powertimer Analyzer software automatically checks for updates during the program startup. If updates are available you will be asked to update the software. The update is for both Powertimer Analyzer and Palm Powertimer. During the next synchronization session the software will be reinstalled to the Palm device.

To be able to update software you will need a internet connection.



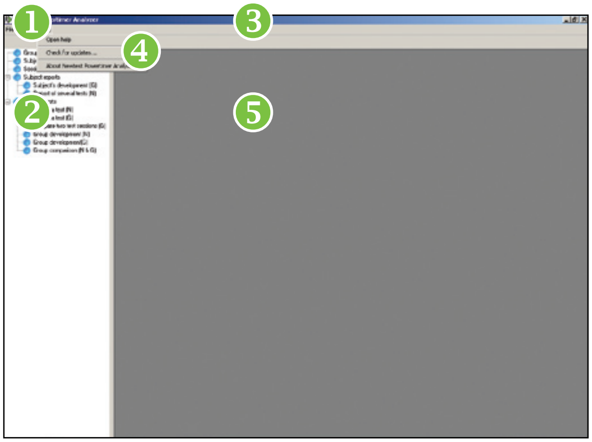
2 FUNCTIONALITY OF THE USER INTERFACE

2.1 Components of user interface

Title bar

Title bar is the top left text in main window. It usually says Powertimer Analyzer and the name of an opened window nested within the main window (see Figure 1).

Figure 1 Components of interface



1. Menu
2. Tree view
3. Title bar
4. Menu items
5. Workspace

Menu

From the menu you can choose different actions or instructions. The different menu items are listed below (see Figure 1):

- *File: "Close" and "Exit".* If there is any window open other than main window, it will be closed when the *"Close"* is chosen. *"Exit"* will shut down and exit the program.
- *Tools: "Options"* will open regional settings—window where you can choose between measurement units. *'Reinstall Newtest Powertimer'* will set the Newtest Powertimer—Palm software into the install list of the install tool. On the next synchronization session the software will be reinstalled to the palm device.
- *Help: "Open help"* opens the help document. Tap *"check for updates",* and you will be guided through checking, downloading and installing possible new updates for Powertimer Analyzer software in World Wide Web. *"About Powertimer Analyzer"* will tell about this software.

Work space

Nested windows will appear in workspace when chosen from treeview or menu (see Figure 1).

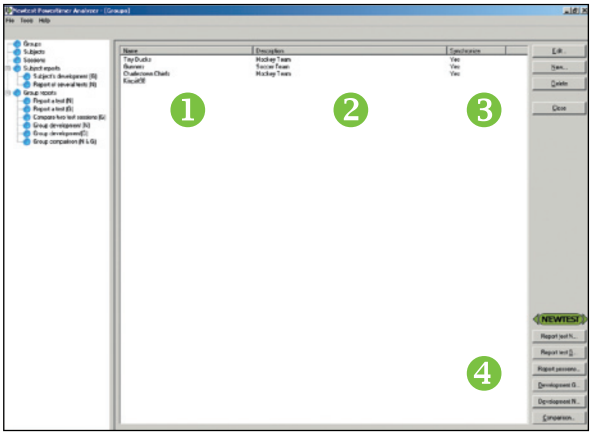
Tree view

From the treeview in the left side of the main window user can easily select most important features of Powertimer Analyzer software (see Figure 1).

3 MANAGING TEST GROUPS

This chapter describes how to manage groups of athlete in the database. Start test group managing by clicking the *"Groups"*- button in treeview. The following *"Groups"*- window (Figure 2) will open:

Figure 2 List of all groups



1. Group name
2. Group description
3. Syncronize to Palm
4. Report buttons

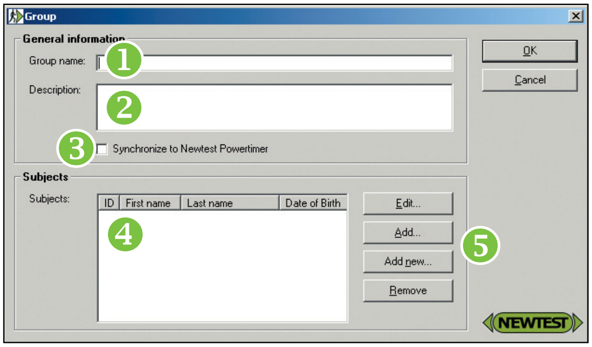
3.1 Browsing groups

When clicking the *"Groups"*- button in treeview, all the groups in database will appear in the window opening in workspace. If the database contains more groups than there is room for in the window, a scroll-bar will appear. Also, you can organize groups by ID (order in which they have been created) or by name (alphabetical order) to ease browsing. That happens by clicking the columnheader (see Figure 2).

3.2 Adding a new group to database

Adding a new group to database is to click the *"New..."* button in the right in *"Groups"*- window (see Figure 2). The following window (Figure 3) will open:

Figure 3 Group- window for adding



1. Combo box: Group name
2. Text field: Description
3. Check box: Synchronize - check
4. List: Subjects (athletes)
5. Buttons for editing athlete data, adding an existing athlete to group, adding a new athlete to group (and to database) and removing an athlete from group

Each group must have a name. Think carefully what kind of a name is describing enough for later browsing: combining at least team name and age or agegroup as well as sex of the group members is recommendable. Enter the name in the *"Group name"*- line at the top. Additional precision can be achieved by writing a more detailed description in "Description"- field.

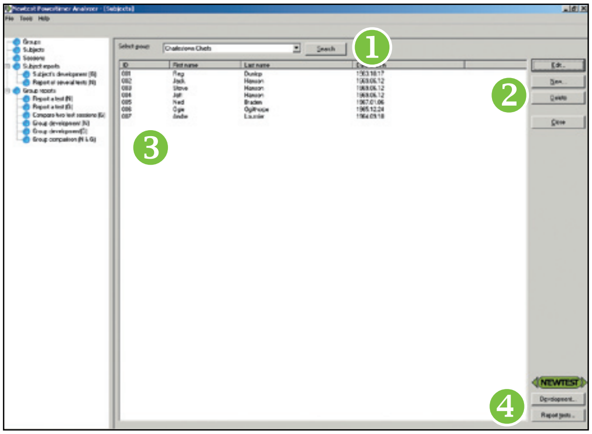
If you check the checkbox *"Synchronize to Newtest Powertimer,"* the group will be exported to Palm handheld the next time you synchronize your Palm with the pc.

ⓘ *Note: at this stage you cannot start adding athletes to database yet, you click "OK" instead to confirm new group to be created. The new group will be added to the database and given a unique ID. See the following sections to find out how to manage the group members*

List of group members

In *"Groups"* window (see Figure 2), double click the desired group in a list of groups. The *"Group"* -window will open (see Figure 3). Tap the appropriate column in *"Subjects"*- section to order athletes by ID, the first name, the last name, or by the age. Here you can also add an athlete existing in database (*"Add..."*) or a new (*"Add new..."*) athlete to group. If you select one of the athletes from the list you can alter the athletes data by clicking *"Edit..."* or remove one from group by clicking *"Remove."* We will return on those actions later on in chapter 4: Managing athletes.

Figure 4 List of all athletes



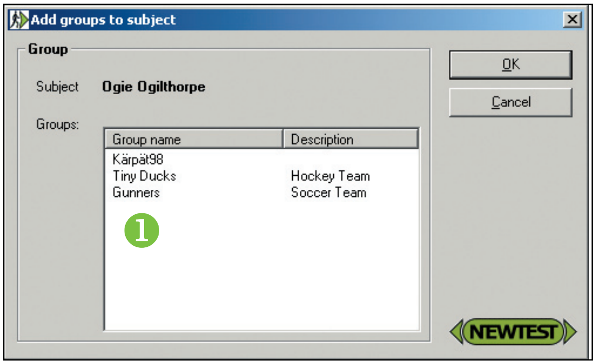
1. Button: Search
2. Buttons: Edit athletes data, add new athlete, delete athlete, close window
3. List: Subjects (athletes)
4. Report – buttons for athlete reports

Adding existing athletes to group

From main window, *Groups*>> doubleclick the group you wish and click *"Add"* (see Figure 3). The following window will open:

Doubleclicking an athlete will add one to group. The program will return to *"Group"*- window, where you can now see the added athlete with the previous ones. Other route to add athlete to group is via adding groups to athlete: from main window: *Subjects*>>doubleclick an athlete, and in the opening "*Subjects Information*" -window clicking *Groups*- button will open following Figure 5. Selecting a group and clicking *"OK"* or doubleclicking *Group* will add athlete to that group.

Figure 5 Add groups-to subject window



❶ List: The groups to which an athlete can be joined

Adding new athletes to group

Adding a new athlete to a group can be done by adding a new athlete to database (see chapter 4.2 Adding a new athlete to database) and then adding the athlete to a group (see chapter 3.2 Adding existing athletes to group) OR directly from tree view: *"Groups"* >> doubleclick the group in question and in the opening window click *"Add new…"*- button. Both ways will result in opening *"Subjects information"* – window (see chapter 4.2 Adding a new athlete to database). If you started with the direct way i.e. clicking *"Add new…"* in *"Group"*- window, as soon as you have filled the fields for new athlete information and clicked ok, the newly introduced athlete will be added both to database and to the group in question.

Removing an athlete from a group

Easiest way to remove an athlete from a group is to click *"Groups"* in tree view, doubleclick the group in question and in the opening window (return to chapter 3.2 List of group members to see the window) select the athlete and click *"Remove."*

ⓘ *Note: The athlete will be removed only from that particular group, not from the other groups athlete is possibly belonging to nor from the database. You can also remove an athlete from a group by going to athlete's personal information (from tree view: "Subjects" >> doubleclick the athlete name) and in groups-field select the group and click once the right mouse button and a pop-up menu will appear. From the pop-up menu select the "Remove subject from group" – item and click. You will be asked whether you want to remove subject from that group or not, click yes if you do.*

Editing group member information

Click *"Groups"* in the tree view, double click the group in question and in the opening window (return to chapter 3.2 List of group members to see the window) double click the athlete. You can also edit an athletes data by going straight to "Subjects" from the tree view and select the athlete from the list and click edit or just double click the athlete, and start refilling fields in the opening window.

3.3 Editing group

When in need to edit group data, click *"Groups"* in the tree view (see Figure 2) Then double click the group or select it and click *"Edit"*- button. The opening window can be seen in Figure 4. Just refill those fields needed and click ok. If you click *"Cancel,"* no data will be changed in database.

3.4 Deleting group from database

When in need to delete group from database, click *"Groups"* in tree view (see Figure 2). Then select the group and click *"Delete"*- button. The group will be deleted. However, the database will still hold all test data collected under that group, individual athletes' test data will not be lost.

3.5 Generating group reports

Application generates several types of test reports automatically if wanted both for viewing and for printing. Click *"Groups"* in treeview and select a group, then click the type of report you want in buttons down right or press the right mouse button to get the report menu to appear. Letters *"N"* and *"G"* stand for *"Numerical"* and *"Graphical"* respectively. You can also select reports of groups to be generated from treeview directly (group reports). Regardless the report type, always a new window will open. More detailed instructions for generating different group reports are found in chapter 8.

4 MANAGING ATHLETES

This chapter contains instructions for adding, editing and deleting data in database regarding individual athletes.

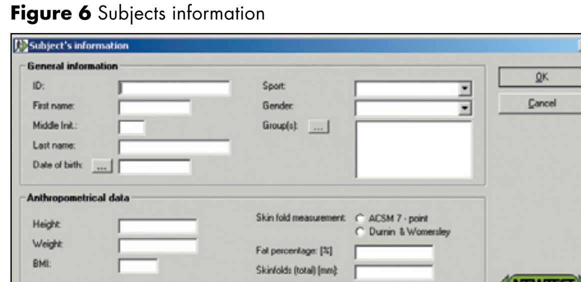
4.1 Browsing athletes

When clicking the *"Subjects"*- button in tree view, all the athletes in database will appear in the window opening in the workspace. If the database contains more athletes than there is room for in the window, a scroll-bar will appear. Also, you can organize athletes by ID or by name (alphabetical order) to ease browsing. That happens by clicking the columnheader. The *"Subjects"*- window looks like the one presented in Figure 4. In the drop-down list beside the text *"Select group"* you can select one of the groups in database. Pressing *"Search"* will result in members of that particular group solely visible in window, thus making browsing easier when long list of athletes occur in the database.

4.2 Adding a new athlete to database

Easiest way to add an athlete to database is to click *"Subjects"* in treeview and in window opening (see Figure 2) click *"New…"*- button. The following Figure 6 will open:

Figure 6 Subjects information



Inserting general data

It is strongly recommended to create unique athlete ID's (i.e. social security number) right from the beginning of filling the database. The button with three dots just before Date of Birth

– textfield will open calendar where you can select the correct date. Sport and gender are selected from drobdowns.

Inserting anthropometrical data

After inserting athlete's height and weight at their fields the BMI (Body Mass Index) will be calculated automatically. In this context the *Skin fold measurement* and *Fat percentage* are meaningless and disabled – those features are related to editing athlete (see chapter 4.3). (When dealing with existing athlete, Skin fold measurement and fat percentage, if such exist, are searched from database according to your personal method preference - ACSM OR Durnin & Womersley – that is). After filling carefully fields, click *"OK"* and you can consider the new athlete to be added to database with all the personal information.

List of athlete's groups

When adding new athlete, you cannot add athlete to group yet, group(s) -textbox and button are disabled, finish athlete adding first and then add the newly created athlete to group(s) (see chapters 3.2. for adding existing and new athletes to group). When managing existing athlete, the list will contain all groups this particular athlete belongs to.

Attaching athlete to group

See chapter 3.2 for adding existing and new athletes to group.

4.3 Editing athlete

See the window in Figure 6. The same window will open – with fields filled this time - when you want to edit athlete's personal information. Athlete's data can be edited by clicking *"Subjects"* in treeview and in the opening list either by double-clicking athlete or by selecting one and clicking *"Edit…"*- button. For more detailed description of fields in *"Subjects information"*- window, see chapter 5.2.

4.4 Deleting athlete from database

When in need to delete athlete from database, click *"Subjects"* in main window (opening window presented as a Figure 4-3). Then select the athlete and click *"Delete"*- button. The athlete will be deleted.

Deleting athlete from database will delete all the one's results as well.

4.5 Generating athlete reports

Application generates several types of test reports automatically if wanted both for viewing and for printing. Click *"Subjects"* in treeview and select a group, then click the type of report you want in buttons down right. *"N"* and *"G"* stand for *"Numerical"* and *"Graphical"* respectively. You can also select reports of athletes to be generated from treeview directly (subject reports). Regardless the report type, always a new window will open. More detailed instructions for generating different athlete reports are found in chapter 7.

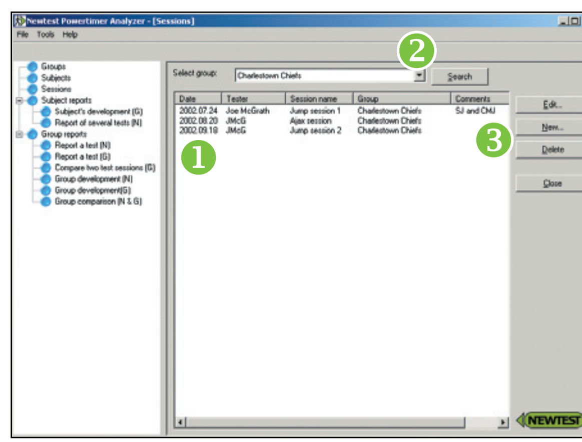
5 MANAGING SESSIONS

This chapter contains instructions for adding, editing and deleting data in database regarding test sessions.

5.1 Browsing sessions

When clicking the *"Sessions"*- button in treeview, all the Sessions in database will appear in the window opening in workspace. If the database contains more Sessions than there is room for in the window, a scroll-bar will appear. Also, you can organize sessions by ID or date (order in which they have been created), by session name (alphabetical order) or by tester name to ease browsing. That happens by clicking the columnheader. The appearing window (Figure 7) is presented below.

Figure 7 List of all sessions



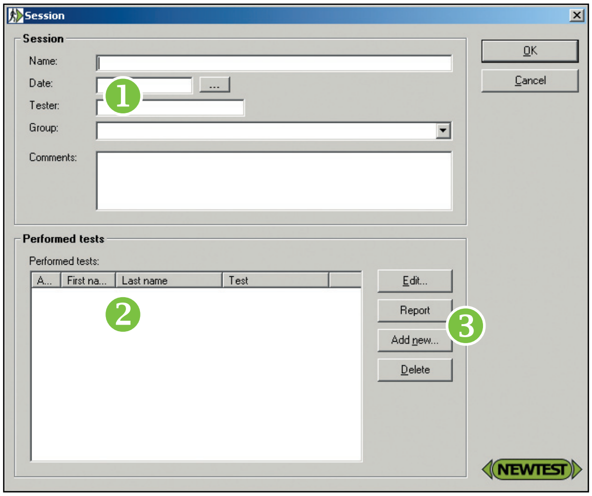
1. Sessions
2. Combo box: select a group if you have lots of sessions, it eases the search. After selecting a group, tap "search".
3. Buttons for editing sessions, creating new ones, deleting session and for closing the window.

5.2 Adding new session to database

You can add a performed test session to the database manually if you wish. You may want to do that, for example, if you have older session results printed in paper and you want to

save and manage those results using your new Newtest Powertimer Analyzer. Easiest way to add session to database is to click *"Sessions"* in treeview and in window opening (see Figure 7) click *"New…"* button. The *"Session"* window (Figure 8) will open:

Figure 8 New session window



❶ Fields to fill for creating a new session: Session name, session date, tester, the group you'll have the session on and the comments.

❷ List: performed tests in session. Includes athlete name & test name

❸ Buttons: after selecting a performed test from list, click to edit, report or delete it or to add a new performed test manually to database

See Figure 8. Insert session name to first field. After a while you may have dozens of sessions in database and you still will definitely want to find the right one easily later on, so consider carefully the type of name that tells most. Clicking the button with three dots at the end of the Date row will open a calendar, where you can select the correct date for the session. In the next line the tester is wanted. Only a group can have a session, all available groups are found in a dropdown *"Group,"* where one should be selected. If you have not yet created the group you were planning to have this session on, cancel the session creating and create the group first (creating a group, see chapter 3.2). At this stage there is nothing to edit, delete or report, so the *"Performed tests"* section is disabled. Click *"OK"* to accept the data you inserted and to add the new session to database.

5.3 Editing session

See Figure 8. The same window will open—with fields filled this time—when you want to edit session data. Session's data can be edited by clicking *"Sessions"* in treeview and in the opening list either by doubleclicking athlete or by selecting one and clicking *"Edit…"* button. For more detailed description of fields in *"Session"* window, see chapter 5.2.

5.4 Deleting session from database

When in need to delete a session from database, click *"Sessions"* in the main window (the opening window is presented as the Figure 7). Then select the session and click the *"Delete"* button. The session will be deleted.

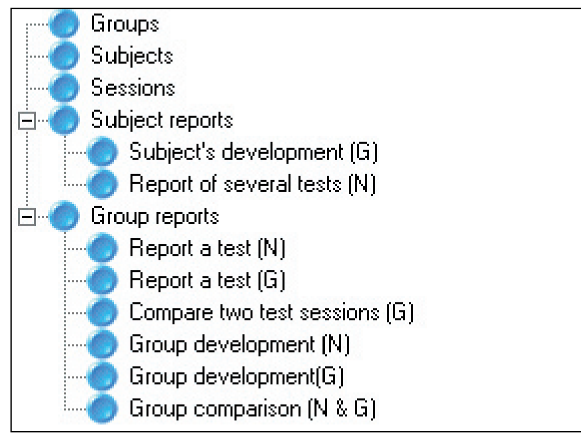
ⓘ *NOTE: Deleting session from database will delete all the results in session. For example, later athlete development monitoring will not include the results from the tests performed in the deleted session.*

6 REPORTING

You can create both athlete- or group level reports in graphical and numerical format. Graphical reports can be printed and saved into PDF format, which is convenient format for e.g. sending reports through world wide web for further analysis. Also, graphical reports can be exported to Rich Text (.rtf) format. Numerical reports can be printed and exported to MS Excel format.

Reports can be generated directly from tree view (see Figure 9. Also, generating a report while browsing athletes and groups is possible (see Figure 10 and Figure 11).

Figure 9 Report from tree view



Reports can be created directly from tree view by clicking the report type you want to generate. Reports are divided into two sections: Athlete *(Subject)* level reports and *Group* level reports.

Figure 10 Report buttons at the Subjects (Figure 4: List of all athletes) window

Generate an athlete level report by selecting the athlete from the Subjects window and pressing the selected report button or by selecting the Subject and pressing right mouse button to get the report menu visible. Report buttons are placed at the bottom right corner of the *Subjects* window.

Figure 11 Report buttons at the Groups (Figure 2: List of all groups) window

You can generate a group level report by selecting the group from the *Groups* window and pressing the selected report button or by selecting the group and pressing the right mouse button to get the report menu visible. *Report*- buttons (Figure 11: *Report*- buttons at the *Groups* (Figure 2: List of all groups) window) are placed at the bottom right corner of the *Groups* window.

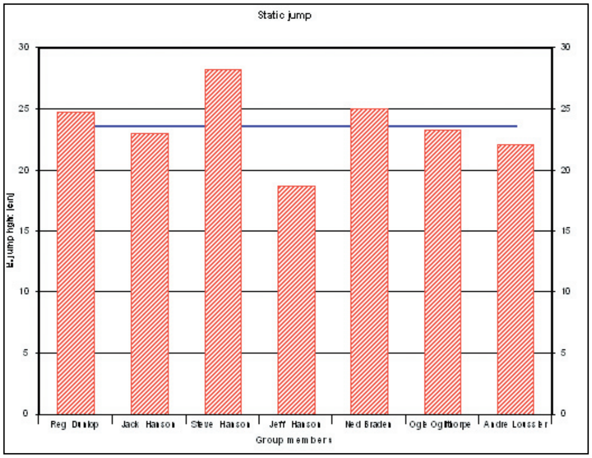
6.1 Viewing graphical report

It is possible to export a graphical report to PDF and RTF format, print the report and zoom the report to view more details when appropriate. These options can be selected from the graphical report toolbar.

Figure 12 Graphical report toolbar

Graphical reports contain a bar chart for every selected group, athlete or session to report. Report contains also an average line that represents the average of all results on the chart.

Figure 13 Chart of the graphical report



Exporting graphical report to PDF format

Export the generated report to PDF format by clicking the *Save to PDF format–* button on the upper left corner on the report toolbar (see Figure 14). When the button is pressed, a save dialog opens with which you can select the location where to save the exportable document.

Figure 14 Save to PDF format- button

Exporting graphical report to RTF format

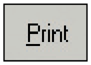
Export the generated report to RTF format by clicking the *Save to RTF format*- button on the upper left corner on the report toolbar (see Figure 15). When the button is pressed, a save dialog opens by which you can select the location where to save the exportable document.

Figure 15 Save to RTF format- button

Printing graphical report

Print the generated report to paper by clicking the *Print*- button on the upper left corner on the report toolbar (see Figure 16).

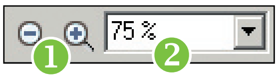
Figure 16 Print- button



Zooming the graphical report

Zoom the graphical report by either pressing the zoom in – and zoom out buttons or selecting the zoom value from combo box (see Figure 17). These options can be found at the upper left corner of the report toolbar.

Figure 17 Zooming the graphical report



1. Zoom in / zoom out- buttons
2. Zoom value combo box

6.2 Viewing numerical report

Generated numerical report can be exported to Excel format and printed to paper. You can also change the page setup from landscape to portrait. If more than one page is generated during the reporting process, you can browse between pages by clicking the *Previous-* and *Next-* buttons located at the upper left corner of the numerical report toolbar. All these options can be selected from the numerical report toolbar (see Figure 18).

Figure 18 Export to Excel- button

1. Export to Excel- button
2. Preview- button
3. Page setup- button

Viewing the print preview

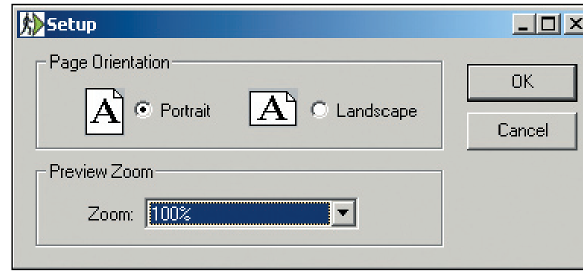
If the printer is installed to the PC, you can view the print preview of the report by pressing the *Preview-* button.

Changing the numerical report page setup

Numerical report setup can be changed from landscape to portrait and vice versa. Change the page setup by clicking the *Setup-* button on the numerical report toolbar. You can view these changes by clicking the *Preview-* button.

When *Setup-* button is pressed, a page setup dialog is opened (see Figure 20). Toggle between Portrait and Landscape orientation by pressing the *Portrait* or the *Landscape* option buttons.

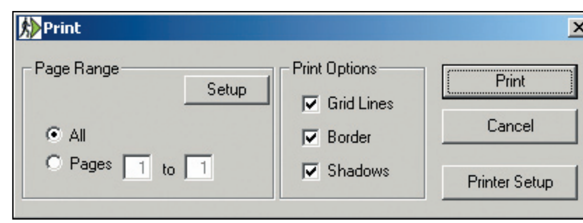
Figure 20 Page setup on numerical report



Printing numerical report

The generated report can be printed in paper by pressing the Print- button on the numerical report toolbar. When the *Print-* button is pressed, a print- dialog opens (see Figure 21). In the print- dialog you can configure the printable report. Actual printing is done when the *Print-* button is pressed.

Figure 21 Numerical report print dialog



Zooming numerical report

You can zoom the numerical report by pressing the *Setup-* button on the numerical report toolbar. When setup- dialog opens (see Figure 20), select the zoom value from the combo box and press the *OK-* button.

Zooming can be performed also by pressing the *Zoom-* button on the numerical report toolbar.

7 ATHLETE REPORTS

Athlete reports are reports that contain test results of selected athlete from the selected session(s). Since one chart bar represents one specific test result, on all graphical reports user must select the particular test result type (e.g. best jump height). On numerical reports all test results of a specific test are included automatically in all reports.

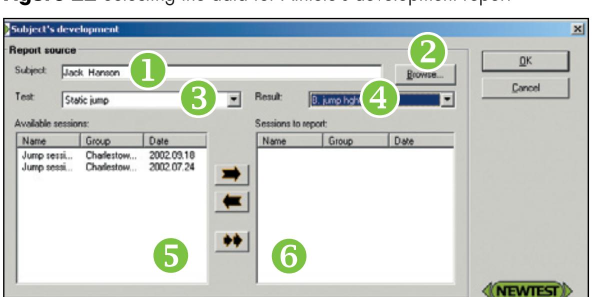
7.1 Athletes development

Athletes development – report monitors athletes perfomance in successive time steps.

Selecting the data to report

In the athletes development report you must select the athlete, the test, the test result and the session(s) you wish to examine on the report (see Figure 22). However, when athlete development report is selected by clicking report button in the *Subjects*- window (see Figure 10), the *Subject* field (athletes name) will be automatically filled.

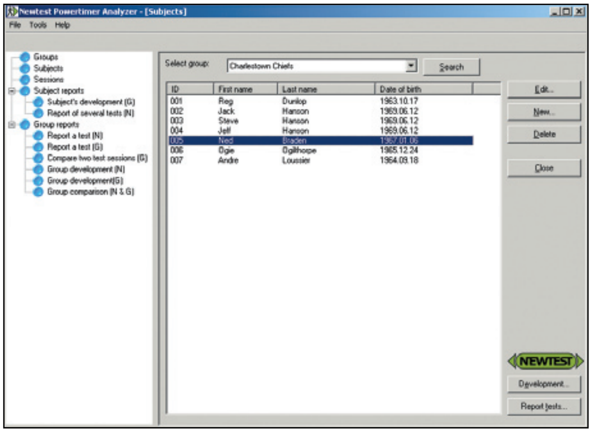
Figure 22 Selecting the data for Athlete's development report



1. Subject field
2. Browse subject- button
3. Test combo box
4. Test result combo
5. List: Available sessions
6. List: Sessions to report

To select the athlete to report, press the *Browse*- button (see Figure 22) on the *Subjects development*- window. The *Select athlete to report*- window (Figure 23) will open showing all listed athletes. You can select the athlete to report by selecting

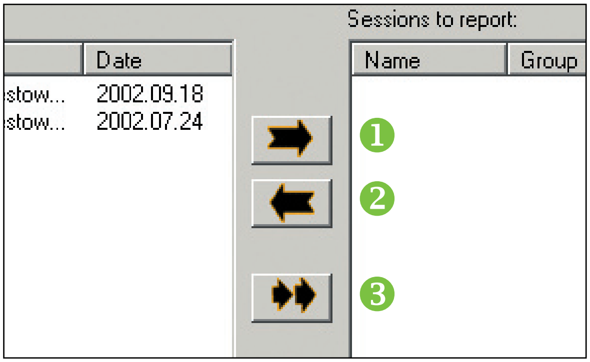
Figure 23 Select athlete to report- window



the athlete from list and clicking the *OK*- button or by double clicking the athlete on the list (see Figure 23). When athlete is selected, all athlete's sessions are loaded into *Available sessions*- list . Now select the test from the *Test* combo box (see Figure 22). After test is selected, all test result types of the selected test are loaded into *Test result* combo (see Figure 22). When selecting the test, system reloads all the sessions where the athlete has performed the selected test. Thus, you don't have to seek through all sessions to find the ones where selected test have been performed. You can select and remove the sessions you wish to report by clicking the *Add session to report, Remove session from report* and *Add all sessions to report*- buttons (see Figure 24). Sessions can be moved also just by double clicking the selected session.

After all wanted sessions are selected, report will be generated by clicking the *OK*– button in the *Subjects development*- window.

Figure 24 select and remove session

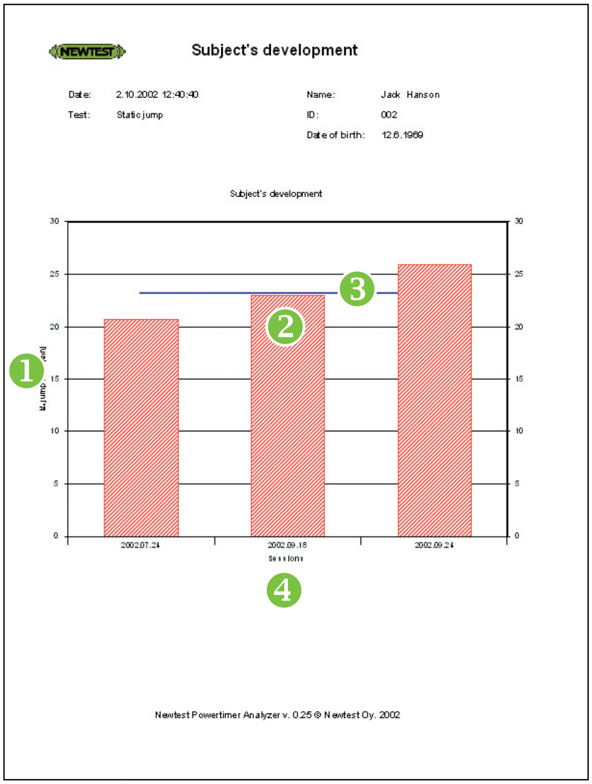


1. Add session to report
2. Remove session from report
3. Add all sessions to report

Viewing the Athletes development report

The generated report will look like in the Figure 25. Each bar represents the result of the chosen result type in one session. Thus it is easy to see the development. Above the bar chart, athletes identity as well as test name and reporting date are shown. Below each bar is the date of the session.

Figure 25 Athletes development report



1. Test result name
2. Result of one session
3. Average line
4. Test session date

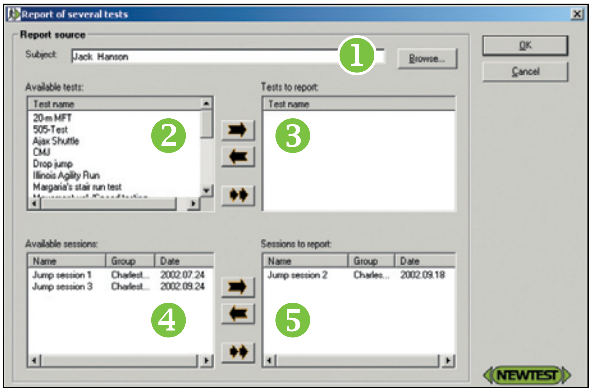
7.2 Summary of several tests

To report several tests of certain athlete in one report, click *Subjects >> Report of several tests (N)*. Since there are possibly several dimensions (many sessions each containing several tests, each test holding several result types), the results cannot satisfactorily be presented graphically. Thus, summaries are provided only in numerical form (the "N" in parentheses after button label).

Selecting data for reporting

Pressing *Subjects* >> *Report of several tests* will open following window:

Figure 26 Report of several tests



1. Browse subject to Subject- field
2. List of tests
3. The tests selected for reporting. See Figure 24 to see how to use arrows when selecting tests.
4. List of sessions for given athlete and given tests
5. The sessions selected for reporting. See Figure 24 to see how to use arrows when selecting tests

Proceed in steps (see Figure 26):

- Select an athlete to subject-field by browsing with *Browse*- button. In the opening window (Figure 23) select the desired athlete and click *OK*.
- Select the tests needed from *Available tests*- list (Figure 26) and use arrows to move them to *Tests to report* (for using arrows, see Figure 24).
- Analyzer will show only sessions performed by athlete selected in first step in *Available sessions*. Again, pick wanted items by moving them to *Sessions to report*- window using the arrow- buttons.

Click OK and wait for the Analyzer calculate all the results and to show them in report. The structure of the report is presented in next chapter. The functionalities (i.e. printing) are similar in all reports, see Viewing numerical report, chapter 6.2.

Viewing the (numeric) report of several tests performed by one athlete

Appearance of report depends on the number of tests, sessions and results to be reported in report. An example is presented in figure 27.

Figure 27 One athlete, several tests

NEWTEST	200[illegible]24	Ref.	2002.08.20	Ref.	2002.09.18	[illegible]	2002.09.24	Ref.
Height	180,00		180,00		180,00		180,00	
Weight	90,00		90,00		90,00		90,00	
BMI	27,78		27,78		27,78		27,78	
Static jump								
Best jump hght [cm]	20,71	25			22,99	25	25,95	25
Abs. Peak Power [W]	3279,34	25			3417,54	25	3597,01	25
Best flight time [illegible]	[illegible]0	25			433,00	25	460,00	25
Jump hght avg [cm]	20,17	25			22,47	25	25,39	25
Flight time avg [ms]	405,50	25			428,00	25	455,00	25
Ajax Shuttle								
Time [s]			0,60					

1. Session dates
2. Reference values
3. Test name
4. Result types
5. Result values

See Figure 27. In the first row there are session dates and *"Ref"*- labels (*Reference value*) following each other. If there are more results of different athletes of same sport and age class in database, the reference value tells the quality of each result compared to other resembling values. If your reference value is for example 76, it means 76 % of other results in database having athlete with same sport and ageclass are worse than yours, or in other words, if your result is the best the figure will be 100. Number of columns will be as large as needed to show all the sessions wanted, and sessions will continue in subsequent pages if needed.

In the first column there are the test names presented in bold, then the result types following immediately. The units of the results are presented in parentheses after the result type. An empty row separates the different tests.

In the following columns are the test results and reference values represented for each result type. Different session may contain different tests performed, and not all tests are performed in every session. In such cases the result values and reference values are just empty. Reference value being empty may also follow from lack of the data of resembling athletes in database. New pages are added to report as the number of the selected tests grows, just like it does when more sessions are included. See Viewing numerical report, chapter 6.2 to find out how to move between pages, print pages etc.

8 GROUP REPORTS

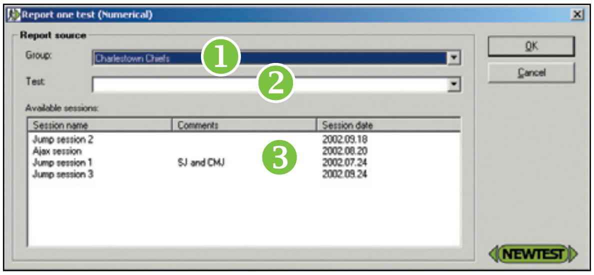
8.1 Report a test (numerical report)

This report type is for reporting all the results of whole test-group of one single test in one single test session.

Selecting data to report

You will find this feature in treeview: click *Group reports* >> *Report a test (N)*. Another route is clicking *Report test N...* - button in the *Groups*- window (Figure 2) .The following window will open:

Figure 28 Report a test (N), selecting data



1. Combobox: group
2. Combobox: Test
3. List of available sessions

- Select a group from the uppermost *Group*- combobox. At this stage the list *Available sessions* will show all the sessions that particular group has stored in a database.
- Select a test from the lowermost *Test*- combobox. After that, only sessions where at least one of the athletes in the group selected in the uppermost combobox has performed the test selected in the lowermost combobox are shown in list Available sessions.
- Click to select the desired session from the list *Available sessions*.

Click *OK* and wait for the report to be presented.

Viewing report

The report will have the following layout:

Figure 29 Report of several tests

NEWTEST	B. jump hght [cm]	Ref.	Abs. P Power [W]	Ref.	B. fight time [ms]	Ref.	Jump hght avg [cm]	Ref.	Fight time avg [ms]	Ref.
Reg Dunlop	24,83	50	3529,28	50	450,00	50	22,23	50	425,00	50
Jack Hanson	22,99	12	3417,54	12	433,00	12	22,47	12	428,00	12
Steve Hanson	28,25	40	3736,94	40	480,00	40	27,21	40	471,00	40
Jeff Hanson	18,65	0	3154,13	0	390,00	0	16,84	0	370,00	0
Ned Braden	25,05	75	3542,70	75	452,00	75	23,86	75	441,00	75
Ogie Ogilthorpe	23,31	25	3436,95	25	436,00	25	22,01	25	423,50	25
Andre Lo[illegible]er	22,15	0	3366,45	0	425,00	0	19,02	0	392,50	0
Average	23,61	28	3454,86	28	438,00	28	21,95	28	421,57	28
Deviation	2,95	27	179,25	27	27,71	27	3,33	27	32,61	27
Min	18,65	0	3154,13	0	390,00	0	16,84	0	370,00	0
Max	28,25	75	3736,94	75	480,00	75	27,21	75	471,00	75

1. Athlete names
2. Average of group results
3. Deviation of group results
4. Minimum value of group results
5. Maximum value of group results
6. Reference value for column result
7. Result columns

See Figure 29 above. In the first column the four last rows are *Average, Deviation, Min* and *Max* respectively. In the rows above them are all the group's athletes listed. In the first row are the result types gained from the test each in it's own column, separated by *"Ref" (Reference value)* columns. Athletes are each in their own rows. *Average*- row holds the average of each result type for the whole group. Similarly, *Deviation,* the *smallest value (Min)* and the *largest value (Max)* represent the values for the whole group of that particular test result whose column they are located in.

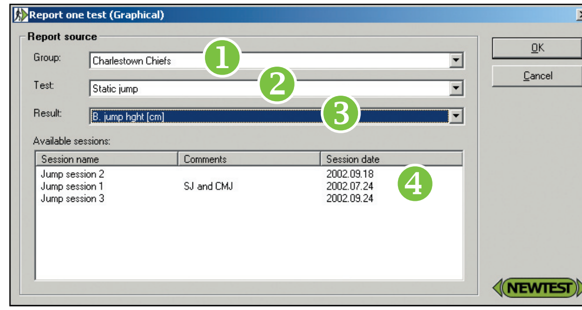
8.2 Report a test (graphical report)

This report type is for reporting one result from one test in one session for multiple athletes. The results are shown as a bar chart.

Selecting data to report

You will find this feature in tree view: click *Group reports >> Report a test (G)*. Another route is clicking *Report test G*-button in the *Groups*- window (Figure 2) . The following Figure 30 will open:

Figure 30 Report a test (G), selecting data



1. Combo box: group
2. Combo box: Test
3. Combo box: Result
4. List of available sessions

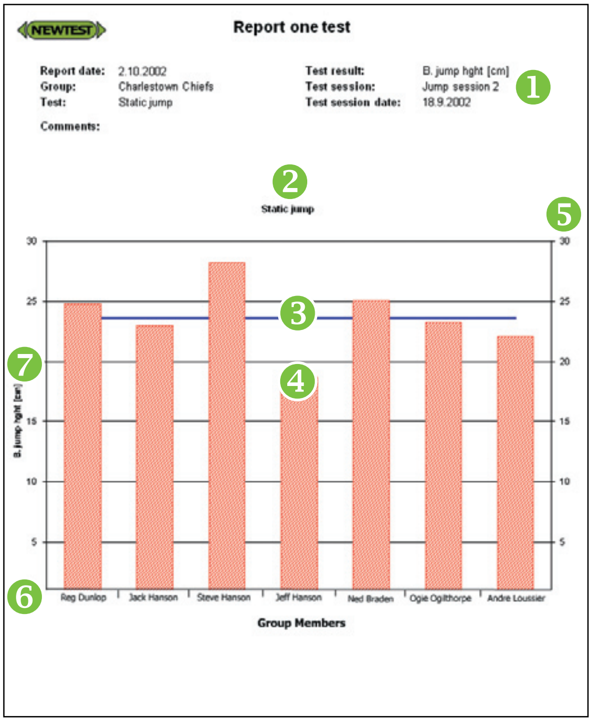
See Figure 30 above and:

- Select group from combo box *Group.*
- Select test from combo box *Test.*
- Select result type from comb box *Result.* Only the result types of the test selected in the previous combo box are available.
- Select session from the list *Available sessions.* Only sessions matching the criteria of the two uppermost combo boxes are shown.
- Click *OK* and wait for the report to appear on the screen

Viewing the report

Picture of a report is presented in Figure 31 zoomed out. Each athlete will have his own result bar with name written below. An average of results is presented as a horizontal line starting from the first bar. These and the rest of the data are pointed in the picture. See chapter 6.1 "Viewing graphical report" to learn how to print, export or otherwise manage report.

Figure 31 Report a test (G), viewing report



- ❶ Report information
- ❷ Test name
- ❸ Average of results
- ❹ Result bar(s)
- ❺ Scale
- ❻ Athlete names
- ❼ Result type & unit

8.3 Compare two test sessions

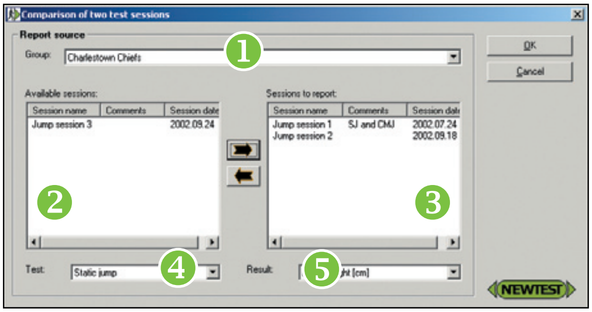
This report type is for presenting the results of a certain test and the result type in two sessions. Thus, each athlete will have two bars (one per session) in Figure 32.

Selecting data for the report

See the picture above. This window will be found by clicking *Group reports >> Compare two test sessions in tree view.* Another route is clicking *Comparison-* button in the *Groups*-window (Figure 2).

Select a group from the uppermost combo box and all that group's sessions will appear in *Available sessions-* list. Select the sessions to be compared by selecting and moving them to

Figure 32 Selecting the data for comparing two sessions



- ❶ Combo box: Groups
- ❷ List: Available sessions
- ❸ List: Sessions to report
- ❹ Combo box: Test
- ❺ Combo box: Result types

Sessions to report- list one by one using arrow- buttons. *Then* select the test from the *Test-* combo box and the result type from the *Result type-* combo box. Then click *OK* and wait for the report.

Figure 33 Viewing the report Comparioson of two sessionss

- ❶ Report information
- ❷ Scale
- ❸ Two bars for each athlete, one per session
- ❹ Average line
- ❺ Result type & unit

Viewing report

Picture of the report is presented in Figure 33 zoomed out. Each athlete will have two own result bars with a name written below. The two bars represent the results of the particular type of result in the particular test in the chosen two sessions. Average of all results is presented as a horizontal line between the bars. These and the rest of the data are pointed in the picture. See chapter 6.1 "Viewing graphical report" to learn how to print, export or otherwise manage report.

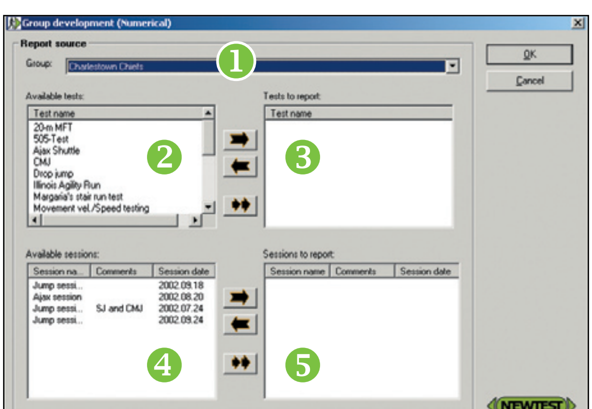
8.4 Group development (numerical)

This report type is for reporting the group averages of one test in the different sessions. A very suitable report type for monitoring e.g. team development in successive time steps. All the result types of the chosen test are presented in this numerical report.

Selecting data for the report

Select the data for numerical *Group development report* in window presented in Figure 34. It will be found by clicking the *Group reports>> Group development (N)* in tree view or clicking comparison- button in the *Groups*- window (Figure 2). Following window will open:

Figure 34 Selecting data for numerical group development report



1. Combo box: Group
2. List: Available tests
3. List: Tests to report
4. List: Available sessions
5. List: Sessions to report

Viewing report

Picture of a (piece of the) report is presented in Figure 35 zoomed out. All the result types of the chosen test are presented for the group as an average in each session selected to report. Managing report (saving, printing etc., see chapter 6.1 Viewing numerical report)

Figure 35 Numerical group development report

NEWTEST	2002.07.24	2002.08.20	2002.09.18	2002.09.24
Static jump				
B. jump hght [cm]	23,27		23,61	25,95
Abs. P Power [W]	3434,67		3454,86	3597,01
B. flght time [ms]	434,29		438,00	460,00
Jump hght avg [cm]	22,79		21,95	25,39
Flght time avg [ms]	429,57		421,57	455,00
Ajax Shuttle				
Time [s]		0,60		
Drop jump				
B. jump hght [cm]				
Best cntct. time [ms]				
B. flght time [ms]				
Abs. P Power [W]				
Rel. Power [W]				
React. Strength Index				
Jump hght avg [cm]				
Cntct time avg. [ms]				
Flght time avg [ms]				

1. Each session is placed in its own column
2. Each result type placed in its own row. Different tests are separated with an empty row.

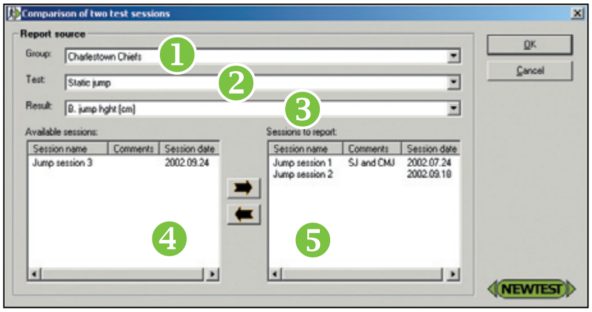
8.5 Group development (graphical)

Reporting graphically the group development can only be done for one single result type of a test, since only two dimensions are allowed.

Selecting the data to report

To open the window åresented in Figure 36 for selecting data to graphical group development report, click *Group reports*

Figure 36 Selecting data to graphical group development report



- ❶ Combo box: Group
- ❷ Combo box: test
- ❸ Combo box: Result
- ❹ List: Available sessions
- ❺ List: Sessions to report

>> *Group development (G)* in a tree view or *Development G...* - button in *Groups*- window (Figure 2: List of all groups). Select the group from the *Group*- combo box (see figure below), then select the test from Test- combo box and the particular result type from *Result*- combo box. Only the result types of the chosen test are shown. The *Available sessions*- list will show all sessions matching the criteria of the group and the test. Move the needed sessions to *Sessions to report*- list using arrow buttons, click OK, and wait for the report to show up.

Viewing the report

Picture of an example report is presented in Figure 37: *Graphical group development report.* For managing report (saving, printing etc.), see chapter 6.1. The dates of sessions are palced below each bar. In the *General information* are presented the report date, the group name, the test and the result type. The *Average of all* bars is shown as a horizontal line.

8.6 Group comparison (numerical & graphical)

Group comparison (numerical & graphical)

In this report type the results of two groups can be compared. The values to be compared are the averages of the group members in one session. In a numerical comparison, all the result types of the selected test are shown. In a graphical report, however, one of the result types must be chosen at a time.

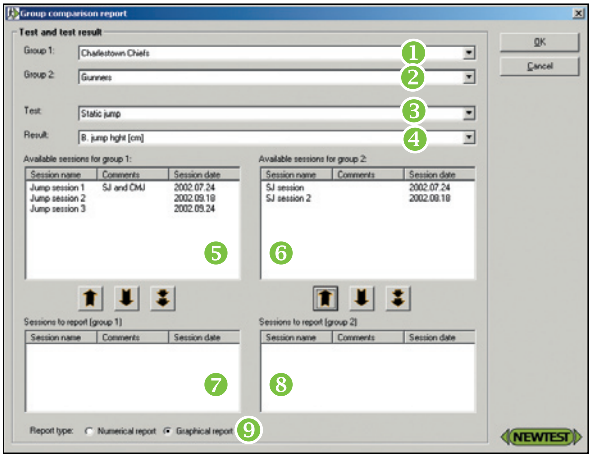
Figure 37 Graphical group development report

- ❶ Report information
- ❷ Scale
- ❸ Bars for each sesson, showing a group average of selected result type
- ❹ Average line
- ❺ Session dates
- ❻ Result type & unit

Selecting the data to report

- Tap *Groups reports>> Group comparison* (numerical and graphical) in the tree view or *Comparison*- button in *Groups*- window (Figure 2: Browsing groups). The following window will open (Figure 38):
- Select the groups to be compared with each other from the first and the second combo boxes (Group 1 and Group 2)
- Select the test for the comparison from the third combo box (*Test*)
- If planning to have a graphical report, choose a result type for comparison from the fourth combo box *(Result type)*. Only result types for the test selected above (combo box Test) are available. Choosing *Result type* is not necessary if heading to *Numerical report* since all the result types of the selected test are included in the numerical report.
- Use the arrow buttons (see Figure 24) to move sessions required for the comparison from *Available sessions*- list for group 1 to the *Sessions to report*- list (group 1). Exactly the

Figure 38 Selecting data for group comparison



1. Combo box: Group 1
2. Combo box: Group 2
3. Combo box: Test
4. Combo box: Result type
5. List: Available sessions: Group 1
6. List: Available sessions: Group 2
7. List: Sesions to report: Group 1
8. List: Sesions to report: Group 2
9. Check boxes: Numerical & Graphical

same must be done for the group 2. Only sessions where there are results of the test chosen in combo box Test will be shown and thus will be possible to be selected.

NOTE: the sessions are compared pairwise. The sessions will appear in sessions to report- list in the order they were selected there AND in the report the first one in sessions to report (group 1) - list will be compared to the first one in session to report (group 2) - list, the second to the second and so on. Thus, it is recommended to choose one first for sessions to report (group1) - list and then pick up carefully the respective session for group 2.

- Select either *Numerical* or *Graphical* for the report type using the check boxes below lists.
- Click *OK* and wait for the report to be shown.

Viewing the report

Picture of an example of numerical group comparison - report is presented below as Figure 39 and of graphical as Figure 40 respectively. See Figure 39 for the location of dates of the sessions being compared. The first date is for the group number one and the second for the group number two. Below session dates in the first column are the result types (depending on which test is in question). The comparisons follow each other as you go downwards the rows, separated by an empty row for the sake of clarity. In the second and the third columns there are the average results for group 1 and group 2 respectively, for each session and result type. To see how to manage the report (print, export, etc), see chapter 6.2: Viewing numerical report.

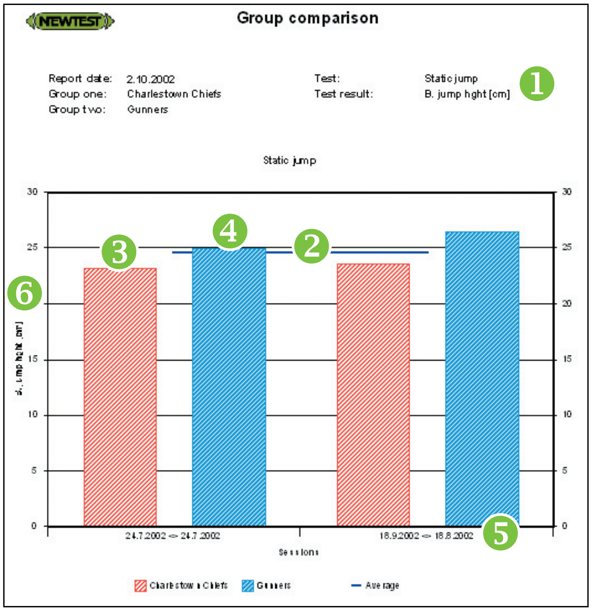
Figure 39 Numerical report for group comparison

	Charlestown Chiefs 1	Gunners 1
24.7.2002 <> 24.7.20 3		
B. jump hght [cm]	23,27	25,01
Abs. P Power [W]	3434,67	3313,38
B. flght time [ms]	434,29	451,50
Jump hght avg [cm]	22,79	24,39
Flght time avg [ms]	429,57	445,75
2		
18.9.2002 <> 18.8.20 3		
B. jump hght [cm]	23,61	26,54
Abs. P Power [W]	3454,86	3406,61
B. flght time [ms]	438,00	465,00
Jump hght avg [cm]	21,95	26,29
Flght time avg [ms]	421,57	462,75
2		

1. Group name
2. Empty rows separatin sessions
3. Session dates

In Figure 40 is presented the graphical report. In General information there are the report date, both group names, the test name and the test result type and unit used in report. Aversage of all bars is oresented as horizontal line. The bars are in pairs: one bar for one session per group. Below the bars are the Dates of sessions in question. To see how to manage the report (print, export, etc), see chapter 6.1: Viewing graphical report.

Figure 40 Graphical group comparison report



1. Report information
2. Averge of all
3. Result bar: Group 2
4. Result bar: Group 1
5. Session dates
6. Result type & unit

9 SYNCHRONIZING DATABASES

9.1 The synchronization of the databases

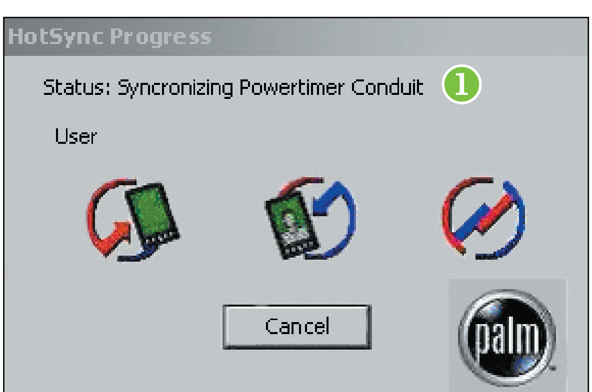
The synchronization of the Newtest Powertimer and Newtest Powertimer Analyzer databases is developed to be as easy as possible. Usually you do not have to make any kind of intervention after the synchronization is started. However, in some rare cases (e.g. duplicate athlete ID is created at the Newtest Powertimer) you are prompted so that the right action is performed. Note that the regional settings must be the same on both ends (Palm & PC) in order to get the synchronization working properly.

9.2 The synchronization sequence

To synchronize the databases, attach the Palm device to the Palm cradle. If no cradle is available, attach the Palm to the PC with the HotSync cable.

After Palm is attached to your PC, press the *HotSync*- button located at the Palm cradle or at the end of the HotSync cable. After *Hotsync*- button is pressed, following dialog in Figure 41 is shown:

Figure 41 HotSync dialog



1 Status text field

The status text field (see Figure 41) shows the status of the synchronization. The Palm may contain many other applications that can be synchronized with your PC. The synchronization of the *Newtest Powertimer* database and the *Newtest Powertimer Analyzer* database is performed when status text field says *'Synchronizing Powertimer Conduit.'*

The synchronization is relatively fast operation; after few seconds the dialog disappears and synchronization is performed. All test, athletesand group data from Newtest Powertimer is transferred to Newtest Powertimer Analyzer.

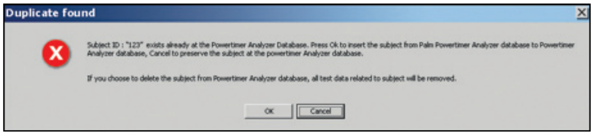
9.3 Synchronization error cases

In this chapter the error cases that can occur during the synchronization are explained.

Duplicate Athlete found

If following dialog (see Figure 42) opens during synchronization, a new athlete is created at the Newtest Powertimer with ID that matches with the athlete ID found at the Newtest Powertimer Analyzer database.

Figure 42 Duplicate found- dialog



Two athletes with the same ID number cannot be saved to the database, so you have to choose which athlete you want to preserve at the Newtest Powertimer Analyzer database. If you wish to save the new athlete made at the Newtest Powertimer, press *'OK'* button on the *Duplicate found*- dialog. In this case, the 'old' athlete at the Newtest Powertimer Analyzer will be deleted, as well as all the test data that is related to 'old' athlete. If you wish to save the "new" athlete that was created at the Newtest Powertimer during the latest session, press *"Cancel"* button. In this case the "new" athlete is inserted to Newtest Powertimer Analyzer database as well as all test data that was performed by the 'new' athlete at the latest session.

Nothing happens after 'HotSync' button is pressed

Check the following if device does not respond to *"HotSync"* button:

- Check that the Palm is correctly attached to "HotSync" cable.
- Check that the "HotSync" cable is attached to PC.
- Check that the Palm Desktop software is installed in to your computer.